THE ORGANIZATION OF WORKMEN'S COMPENSATION INSURANCE

American experience with compensation insurance, while not of long duration, is extremely varied in character. We have monopolistic and semi-monopolistic state funds, competing state funds, stock-insurance companies, mutual associations, interinsurance exchanges, and the hybrid stock-mutual companies. It is even by no means uncommon to find all these types of insurance carriers (except the first) coexisting in the same state. Not content with this great variety of options, nearly all American jurisdictions provide as well for what, by a naïve paradox, is styled self-assurance—which, of course, is not a form of insurance at all, but the negation of it. Indeed, the only important European experiment not hitherto tried upon this continent is the compulsory mutual association of the well-known German pattern.

All this diversity springs neither from chance nor from constructive statesmanship; it reflects, rather, a very lively conflict of views and interests. The best type of organization for work-accident insurance has yet to approve itself to American public opinion. In the meanwhile, a majority of our legislatures have left the problem to work out its own solution through trial and error. The present is, therefore, an opportune moment to examine American and foreign experience in the light of those fundamental principles of public policy which should govern any branch of social insurance.

Workmen's compensation insurance aims both to guarantee the payment of accident benefits and to distribute the cost thereof over the community at large. Both these objects are essentially involved in the public ends for which workmen's compensation laws are enacted, and neither can be attained without effective insurance. Any system of work-accident indemnity which is at all adequate for its purpose must provide life-pensions for permanent disabilities and pensions for long terms of years to the

dependents of those who are fatally injured. It is just these payments which are of the utmost social importance, because upon them depend the nurture and education of whole families, and it is precisely these which employers, individually, are least able to undertake. At the same time, the fatal and permanent injuries which are most burdensome to the employer are precisely those whose occurrence in any given establishment is least predictable. Only collective responsibility, or the accumulation of a trust fund, will provide the requisite security, and only systematic contribution from all establishments involved in the risk of accident will adequately distribute the cost of such accidents as do occur. From this it follows that compulsory insurance is an essential feature of every effective compensation act.

No argument is needed to show that an agency designated by law for the performance of a public function cannot be regarded as a purely private enterprise. Whether or no the element of private profit is permitted to remain, the public interest necessarily dominates every other consideration.[1] Because its objects are purely social, work-accident insurance must be judged exclusively from the social standpoint, and because workmen are the immediate beneficiaries,[2] the paramount social interest therein is the protection of injured workmen and their dependents. Seen from this point of view, the requisites of compensation insurance are: (1) perfect security of future payments, (2) prompt, full, and non-litigious settlement of claims, (3) equitable distribution of costs, (4) effective encouragement of accident prevention, and (5) economical administration. The primary importance of promptness and cer-

[1] Hence arguments for stock-company insurance drawn from the doctrine of vested interest (as in sundry brochures of the Travelers Insurance Company and the National Workmen's Compensation Service Bureau) are *ipso facto* invalid. The question for a legislature to decide is not what is best for existing insurance carriers and their agents, but what is the fittest agency for giving effect to the scheme of work-accident insurance.

[2] The contrary is true of employers' liability insurance, which protects only the employer against legal liability for work accidents. Under many compensation laws the insurer is directly liable to claimants; under the contract of liability insurance, the promise of the insurer runs only to the employer. Indeed, the workman often stands a better chance of recovering damages under liability laws when the employer is not insured.

tainty in the payment of benefits needs no emphasis; security is the *sine qua non* of all insurance, and the furnishing of relief, as and when required, is the very purpose of workmen's compensation. A system of insurance which fails to accomplish at least these ends is past praying for. Neither is there any call to dwell upon the social value of accident prevention—all will admit that effectiveness in this respect is a prime criterion of efficient compensation insurance. The meaning of equity and economy may not be so clear; these are large words which acquire specific content only as they are developed and applied to concrete problems.

Equity, in the present connection, relates to the adjustment of premium rates as among employers.[1] Equity is, of course, a question of prevalent opinion, and prevalent opinion holds that each industry should bear its own accident burden.[2] The assumption is that the employer will pay a premium rate proportionate to the specific hazard of his own line of enterprise and will incorporate the amount thereof on the price of the goods and services sold by him. Consumers will then pay the specific accident cost of each class or species of enjoyable goods. Obviously, however, this ideal can never be wholly realized in practice. The number of industries, defined in terms of specifically different products, is multitudinous, and the number of persons employed in very many of them is wholly inadequate to determine a specific accident cost.[3] As it is only among very large numbers of workmen that the frequency and severity of accidental injuries are at all stable, so it is only within broad groups of industries or of industrial processes, that accident losses can effectually be distributed, even as regards employers. Nor, when this primary distribution is effected, can the resultant cost be passed on to consumers without "lag, leak, or

[1] This assumes that the cost of work-accident insurance should be borne in the first instance by employers. A discussion of this point would divert the main theme and carry the paper beyond reasonable limits of space. In any case, the view here adopted is sanctioned by prevalent opinion.

[2] The so-called "theory of occupational risks." See Downey, *History of Work Accident Indemnity in Iowa*, p. 92.

[3] See Downey, "Classification of Industries for Workmen's Compensation Insurance," *Proceedings of the Casualty Actuarial and Statistical Society of America*, II, No. 4.

friction." The process of shifting an increment of producers' outlay is always intricate. In the present instance the difficulty is complicated by interstate and foreign commerce. Not only do the scale of benefits and the organization of insurance—both of which markedly affect the premium rates—differ radically from one jurisdiction to another, but these differences are offset or magnified, as the case may be, by more important variations in the cost of production. Labor, raw materials, transportation, advertising, are, each and all, much larger items in producers' budgets than any conceivable premiums for accident insurance. All these factors mutually limit one another, as Alfred Marshall might say, to such effect that the simple assumptions of orthodox economic theory are wholly incompetent to unravel the maze. That some shifting of accident cost does occur is undeniable, but that the burden is wholly shifted would be an exceedingly rash assertion. Much of it doubtless falls upon profits, whether of primary producers or of intermediaries. For this very reason, it becomes important to distribute the burden equitably within competing groups of employers.[1] This would mean, in effect, that existing competitive relationships ought not to be disturbed gratuitously by accident-insurance rates. Probably no state would be justified, on that account, in lowering its scale of benefits to the level of another jurisdiction;[2] but a special duty rests upon the government, which has imposed this burden, to prevent discrimination within its own boundaries, against particular employers or employing groups.

All this may seem to overlook the interests of consumers. Consumers, however, are not seriously affected by compensation insurance for the very good reason that accident costs are a negli-

[1] The competing group must be understood in a rather wide sense to allow for the effects of substitution and complementary goods.

[2] The scale of accident benefits is primarily a question of community ethics, or of long-run social efficiency. The decision of such a question ought not to be much influenced by the immediate pecuniary interests of such employers as may be specially exposed to extra-territorial competition. Besides, accident insurance reacts upon both the supply and the efficiency of labor, so that adequate benefits are not wholly disadvantageous even to employers.

gible factor in the retail price of most commodities.[1] Even were the case otherwise, the hardship could not be great, because consumers do not specialize in particular goods or services.[2] The main desideratum, after all, is so to distribute the economic burden of work accidents that it will not fall with crushing weight upon any individual or social group. This object is sufficiently attained by any system of compulsory insurance which safeguards the employer against individual or class discrimination and leaves him, in other respects, to deal with accident costs as he has long dealt with more familiar expenses of production.

The foregoing requirement would be met by a uniform charge upon all industry, irrespective of hazards. No employer would thereby be placed at competitive disadvantage, and no person or class in the community would be heavily burdened. There is, however, another aspect of the matter. It is always to the advantage of the employer, or employing group, to secure a reduction in insurance premiums—just as any other saving in producers' cost redounds to the immediate benefit of the entrepreneurs concerned. In any attempt at rate reduction prevalent notions of fair play afford a powerful leverage. Whatever the form of insurance organization, whether competitive or monopolistic, state or private, it is difficult to maintain a level of rates which cannot be justified by the accident cost of the specific industry involved—that being the norm accepted by common consent. Vice versa, the attempt to collect a rate which will cover this cost is strongly reinforced by the current sense of equity. Preconceptions of right and good

[1] Whether in manufacturing, mining, transportation, or construction, wages rarely amount to 40 per cent of producers' price. Five per cent of the pay-roll or 2 per cent of producers' price will cover the full accident cost in most industries. Even in the state of New York, with its relatively liberal compensation benefits and a very expensive insurance organization, the accident cost of most manufactured articles is very much less than 1 per cent of retail prices. Probably the New York Workmen's Compensation Act has made no appreciable difference in the actual retail price of any one commodity.

[2] It would be no consolation to a manufacturer of agate and enamel ware that an excessive accident-insurance rate upon his industry is offset by a deficient rate upon tin-can manufacturing. In a household budget, however, the one might fairly counterbalance the other.

being what they are, insurance carriers are obliged, within practicable limits, to undertake the adjustment of rates to specific hazards.[1] With regard to this feature of the case the canon of equity runs that the premium for work-accident insurance should be paid wholly by the employer, that rates should reflect specific accident cost within industrial groups broad enough to determine such cost, and that no individual variation from the basis so fixed should be permitted, except for ascertained differences of accident hazard.

Equity concerns only the distribution of the insurance burden; economy has to do with its total amount. Economical management thereby affects the interests of beneficiaries and of the community at large, for, in every branch of social insurance, heavy management expenses react unfavorably upon the scale of benefits.[2] The actual scale of compensation, it is to be remembered, is always the result of compromise between the spokesmen of labor, who demand more, and employers, willing to give still less. Employers in this contest are concerned with total cost, as expressed in terms of insurance rates.[3] If convinced that the "overhead cost" of insurance will be low, they will more readily consent to liberal benefits. To put the matter concretely, the same premium which

[1] Cf. Michelbacher, in *Proceedings of the Casualty Actuarial and Statistical Society of America*, II, No. 4. Mr. Michelbacher's criticisms of the writer's statements *anent* the German mutuals are well taken, but his main point involves a misconception of the writer's proposals. The reform proposed is a *process*, as opposed to a *product*, classification. It is believed, and was urged in the paper, that such a classification would give a closer approximation of rates to establishment hazard.

[2] It is, of course, not true that any determinable amount is available for the indemnity of work accidents, nor is there any direct relationship between economical insurance on the one hand and liberal benefits on the other. Washington, where employers pay only the pure premium and where administrative expenses are met by taxation, has a very niggardly compensation act; New York, with a very uneconomical organization of insurance, pays the highest benefits obtaining in any American jurisdiction. The effect of insurance costs upon the scale of benefits is indirect, and may be more than offset by other factors in the case—the voting power of organized labor, the influence of middle-class uplift associations, the competitive position of the state's industries, etc.

[3] The legislative committee which framed the Colorado Act, e.g., consulted the present writer and the Workmen's Compensation Service Bureau as to the "law differential" and the consequent insurance rates under the pending bill.

The statement in the text disregards employers who carry their own risk. Their number is relatively small, but their influence is often great.

pays 60 cents to the workman and forty cents for the management expenses of insurers would, with a 10 per cent "expense ratio" yield 90 cents for the relief of work injuries.

In fine, therefore, compensation insurance should secure the payment of money benefits and the furnishing of medical relief for work accidents promptly and certainly, distribute the cost over the community with as little disturbance as may be of existing competitive relationships, stimulate accident prevention, and cost no more than is necessary for the effective performance of its functions. These criteria are now to be applied to the several types of insurance carriers already recounted. More than one plane of cleavage runs through these various types. Insurance carriers are competitive or monopolistic, public or private, participating or non-participating,[1] assessment or full reserve, governed by the assured or by a management over whom policy-holders exercise no effective control. Structurally considered, the fundamental types are state, mutual, and stock,[2] with each of which are practically associated other characteristics not inherent in the mode of government. Most discussions of compensation insurance in this country have revolved about the respective merits and demerits of these three forms of organization.[3] The explanation

[1] All state, mutual and interinsurance carriers, as also some stock companies are "participating"—i.e., the policy-holders are entitled to the return of any excess, and obligated to make good any deficit of premiums over losses and expenses incurred. The adjustment may be made by classes, as in the Washington state fund, or upon the business as a whole, as in the Pennsylvania state fund and in most mutuals.

[2] Interinsurers and participating stock companies may be considered as intermediate between the stock and mutual form of organization. Both are participating, and both, as hitherto developed, are more or less within the control of policy-holders. The usual form of interinsurance contract limits the liability of the policy-holder for the losses of any one year to a stated sum—commonly two annual premiums. In practice the control is vested, well-nigh irrevocably, in the so-called attorney in fact. The stock-participating company (e.g., the Pennsylvania Manufacturers' Association Casualty Insurance Company) has a certain paid-up capital to guarantee its liabilities, and policy-holders participate in profits only after the payment of a fixed dividend upon this capital. The stock is held by policy-holders in proportion to premiums, though this is not an essential feature of the stock-participating plan.

[3] See, e.g., the very numerous controversial pamphlets issued by the Workmen's Compensation Information Bureau, the Travelers Insurance Company, the (state) Insurance Federations, the Industrial Commission of Ohio and the New York State Fund.

is not far to seek. State, mutual, and stock carriers are competitors for the same business, and the controversy among them is sharpened by the pecuniary interests of their advocates. From a social standpoint, however, the distinction between competitive and monopolistic insurance is more significant than any differences in the form of organization or in the mode of securing a balance of income and outgo. Every problem of workmen's compensation insurance is aggravated by competition and simplified by monopoly. The nub of the matter is competitive selling; apart from this, the inherent difficulties of this branch of insurance are not much affected by the mere form of organization. The present inquiry, therefore, will focus upon this central issue and will consider other phases of insurance organization only in their bearing upon the main theme.

I. SECURITY

Competition tends to undermine security in two directions: (1) by reducing rates below the margin of safety, and (2) by inducing extravagant selling costs. Both tendencies have been acutely developed in other branches of underwriting,[1] but the danger is especially great in work-accident insurance just because the day of reckoning is long postponed. The payments to be made in any one year on account of that year's accidents are a mere fraction of the final cost—a fraction which is the smaller in proportion as the compensation for death and permanent disability approaches adequacy. It is possible, therefore, to meet current disbursements for a considerable period out of a premium income which is inadequate to discharge the ultimate liability. Sooner or later the uttermost farthing must fall due, but in the meantime carriers are free, so far as cash obligations go, to demoralize their rates and waste their substance in fancy salesmanship.

The significance of deferred liabilities lies in the fact that full reserves are a necessity of competitive insurance. An insurer whose membership is purely voluntary, and which has long-continuing obligations to meet, must set aside the capitalized value of incurred losses under penalty of ultimate insolvency. The truth of this homily is sufficiently enforced by the experience

[1] The situation in employers' liability insurance about the time of the "Emmett Circular" is a case in point.

of assessment life insurance. Now the capitalized value of compensation benefits is, at the present stage of experience, largely problematical—all the more so in proportion as adequate indemnity is provided for death and permanent disability. The mortality among workmen wholly or partially disabled by accident, the death-rate of pensioned dependents, the remarriage-rate of workmen's widows, are so many questions whose final solution must await the gradual accumulation of American statistics.[1] These difficulties are greatly aggravated by the slow development of many serious injuries. Permanent disability from any cause other than dismemberment is rarely known to be such within one year after the accident. Even death not infrequently results from an injury which had been classed as temporary. Unknown dependents (mostly non-resident aliens) and unreported claims still further complicate the estimate of incurred losses. Altogether apart, therefore, from intentional misrepresentation, the tendency to underestimate deferred liabilities in the early years of compensation experience is fairly overwhelming. In Wisconsin the average underestimate for 1914 was 30 per cent of the outstanding, or 14 per cent of total, losses;[2] in Massachusetts the record was hardly better.[3] Individual companies were much wider of the mark, so much so, in some instances, as to jeopardize their solvency.[4] This experience, it is to be observed, was had under acts which limit compensation to fixed and relatively short periods—a circumstance

[1] The New York Insurance Department has adopted the Danish Survivorship Annuity Tables and the Dutch (Royal Institute) Remarriage Tables as a basis of reserves for death benefits. The Ontario Compensation Board bases permanent disability reserves upon the American Experience Table to age 56 and upon a modification of the Healthy Male Table for higher ages. The Industrial Commission of Ohio uses the Carlisle Table for permanent total disability reserves. All these are admittedly makeshifts more or less wide of the mark.

[2] *Industrial Commission of Wisconsin, Workmen's Compensation Insurance,* 1916, p. 6.

[3] Unpublished records of the Massachusetts Insurance Department, kindly furnished by Mr. E. S. Cogswell.

[4] One Wisconsin company was insolvent at the end of 1913, not, of course, legally, but actually, in the sense that its then assets did not equal the liabilities as developed by subsequent claim payment. It was saved by a fortunate expansion of business accompanied by an increase of rates.

The Industrial Commission of Wisconsin in 1916 required one company to increase its reserves by 60 per cent upon an individual claim estimate.

which greatly narrows the margin of error. A like test of estimates under a really adequate compensation law would doubtless show much more serious discrepancies.

Underestimates of deferred liabilities have been dwelt upon because the apparent profits so produced lead directly to rate-cutting, on the one hand, and, on the other, to extravagant methods of business-getting. The experience of Massachusetts is perhaps the best American illustration. When the compensation law of that state became effective, July 1, 1912, the stock companies, upon the basis of inadequate and ill-digested statistics, pitched their rates at a level which was subsequently found to be grossly excessive. Mutual competition proved unexpectedly strong, and an era of persistent rate-cutting set in. By the end of 1914 rates were admittedly inadequate for the increased benefits which the legislature had meanwhile adopted. On some of the most important industries (cotton and woolen spinning and weaving) the rates were less than the pure premium; on the business as a whole the combined loss and expense ratio of stock companies (even without taking account of underestimates of recent losses) was 109 per cent of premium income.[1] This situation was known to demonstration by June, 1915; yet the rates were not changed until nearly a year later, and then only by legal compulsion and in the face of bitter resistance by some of the largest carriers. To this record it may be added that several financially weak carriers are known to maintain inadequate rates in Wisconsin,[2] and that a like condition in California was corrected by legislation. In states

[1] See the *Sixteenth Annual Report of the Insurance Commissioner* (Massachusetts), Part II; also the *Report on Workmen's Compensation Insurance of the Commission to Investigate Practices and Rates in Insurance*, Boston, 1915.

The differential between the original and revised benefits of the Massachusetts act has been a subject of heated discussion and conflicting estimates. The statistics of the Industrial Accident Board are not so compiled or analyzed as to throw much light on the matter. In the absence of specific statistics, the best basis of calculation is the Rubinow Standard Accident Table, which gives a differential of 150.

The statement in the text assumes the law differential of 150, which gives a loss ratio of 73.

[2] The rates are on file with the Industrial Commission. One stock company, with no assets to speak of, maintains average rates below the pure premium and an expense ratio of 40 per cent. Four insurers, none of them financially strong, showed losses and expenses of 133, 123, 108, and 96 per cent of earned premiums on 1915 business. See *Insurance Report of the Industrial Commission of Wisconsin*, 1916, Table III.

like Illinois and Michigan, where there is no insurance supervision and consequently no public records, common report indicates a similar situation.

Unrestricted competition, then, operates to defeat the very purpose of insurance. Just as in other fiduciary relationships, the state has everywhere felt obliged to intervene to the end that compensation payments may be made secure. Governmental action looking to security is of two sorts: control of reserves and regulation of rates. The former aims directly to create a trust fund which will cover deferred obligations; the latter seeks to conserve the resources of the insurers indirectly by preventing cut-throat competition. Unfortunately the measures heretofore adopted are by no means sufficient for the object in view.

The existing reserve laws are based upon a percentage of premium income. Two wholly inadmissable assumptions underlie this requirement: (1) that all carriers will maintain uniformly adequate rates, and (2) that no carrier will experience a loss ratio worse than average. In point of fact, under existing competitive conditions, no company which operates throughout the United States collects an adequate premium on all its business, while the actual loss experience of any given company may depart widely from the average. Under the existing system either inadequate rates or abnormal losses will automatically produce inadequate reserves. Indeed, adequate rates and average losses will give insufficient reserves, because the law assumes that 54 per cent of premiums will cover losses and claim adjustment, whereas rates are calculated upon a loss ratio (exclusive of adjustment expenses) of 57.5 to 65 per cent, according to the scale of benefits. By a curious perversion, moreover, the higher the loss ratio the lower the reserves, not only relatively, but absolutely. Even under a limited benefit act, such as that of Wisconsin, the true outstanding liability at the end of one year will be at least 45 per cent of incurred losses.[1] Given a loss ration of 100, which may easily

[1] The "estimated outstanding" under the Wisconsin Act was 34 per cent at the close of 1914, which was increased to 45 per cent by comparison of actual payments in 1915 upon 1914 losses. The outstanding reported at the end of 1915 on that year's business was 37.5 per cent, indicating another serious underestimate. See *Insurance Report of the Industrial Commission of Wisconsin*, 1915, Table III; 1916, Tables II and III.

be experienced by a cut-rate company, the actual payments for claim losses and expenses will certainly exceed 54 per cent of premium, in which case the law requires no reserve whatever against outstanding liabilities. Hence the anomaly that a company may be legally "solvent," notwithstanding the fact that its assets are grossly insufficient to meet its liabilities.[1] The probability of such a condition is greatest in the case of small companies, whether mutual or stock. On the one hand, small and new insurers are driven to low rates in order to attract business from well-established competitors; on the other hand, their volume of underwriting is insufficient to assure an average experience. Yet our laws permit and even encourage the organization of carriers so small that they cannot possibly be secure.

The root of the evil evidently is the total want of relationship between reserves and liabilities. No mere change in the existing percentage basis will serve the purpose. The corrective is twofold: (1) insistence upon substantial assets as a condition precedent to organization,[2] and (2) the maintenance of reserves calculated upon a standard accident table.[3] Unfortunately, neither the insurance departments nor insurance carriers are yet ready to accept such a solution. A bill has been prepared by the appropriate committee of the National Convention of Insurance Commissioners, which, if adopted, will substantially increase reserves, but even this bill fails to provide an objective test of actual liabilities, which is to say, that the bill lacks the fundamental requisite of a sound reserve law.

[1] The Union Casualty Insurance Company at the close of 1914 had legal reserves for workmen's compensation losses to the amount of $61,000. The actual amount required to pay the outstanding claims for which these reserves were held exceeded $150,000.

[2] As regards a mutual association, a sufficient membership will meet this requirement. But to permit the organization of a mutual covering 1,500 employees, as in Wisconsin, 2,500, as in New York, or 5,000, as in Pennsylvania, is nothing short of folly. The number of employees insured does not at all measure the resources of an employers' mutual. In the clothing or textile trades, 5,000 workmen would not afford a sufficient annual premium to pay one death benefit.

[3] See the very illuminating discussions of compensation reserves by Messrs. Rubinow, Flynn, Dawson, Woodward, Orr, and others, in *Proceedings of the Casualty Actuarial and Statistical Society of America*, I, 90, 140, 279, 294; II, 134–37.

If the present reserve laws do not adequately safeguard the payment of compensation claims, still less is that end subserved by rate regulation. The enforcement of adequate rates for compensation insurance in a given state may protect local mutuals or a competing state fund from ruinous underbidding, but it does not prevent the impairment of resources through extravagant management, unearned dividends, or insufficient rates in other jurisdictions or on collateral lines of insurance. This last consideration is not to be overlooked, because the bulk of compensation insurance is carried by stock companies which transact a miscellaneous casualty business throughout the country, and whose compensation premiums may be only a minor part of their total underwriting income. The futility of attempting to maintain the general solvency of these carriers by regulating their charges on one branch of their business within the limits of a single state is too plain for argument. There is but one way to attain full security with competitive insurance—the compulsory maintenance of adequate reserves. This simple and obvious method has not been so much as attempted in the United States. No one doubts that most of the large companies are thoroughly sound, but their solvency is not at all attributable to government supervision.

Monopoly does not of itself guarantee solvency, but it makes a solvent condition very easy to maintain. Indeed, little else than gross maladministration or excessive incompetence in the original formulation of the scheme can menace the security of a monopolistic work-accident insurer. The potential resources of such a monopoly (unless handicapped by unintelligent restrictions) are nothing less than the net assets of the establishments comprised within it. Its members cannot withdraw at will, and those which discontinue business are continually replaced by new firms. The general power of assessment in such an industrial group of any reasonable magnitude will always suffice to meet accruing payments on account of work accidents. Capitalized reserves, indispensable for competing insurers, are but a needless complication to a carrier whose insurants cannot resign. The monopolist can, with perfect security, collect only sufficient premiums to cover current disbursements. In this way rates will never be either excessive or deficient, for they

will always be determined by actually realized losses. The conjectural element, so prominent in rate-making on the full-reserve system, is almost wholly eliminated. An additional and important advantage of this method is that initial rates are low, rising by nearly imperceptible steps to the maximum, so that industry has ample time to adjust itself to each new level. A sudden increase in any element of producers' costs cannot be fully shifted, while a gradual increase may be.

The objection is often made to the assessment plan that it "saddles future employers with the cost of past accidents," and, further, that an assessment organization, if dissolved at a given time, would be unable to provide for its deferred obligations. Upon some such grounds, apparently (if upon any reasoned grounds at all), the capitalized-reserve plan has been adopted by the monopolistic and semi-monopolistic state funds of the United States and Canada. The first of these objections is clearly a misconception. The maximum assessment rate (barring variations in the frequency and severity of accidents) can never exceed the initial full-reserve premium.[1] If the employer is saddled with the accumulated pensions of his predecessors, he in turn saddles his own deferred liabilities upon the shoulders of those who come after him. The argument from possible dissolution is equally fallacious. Compensation for work accidents is not a passing fancy, but a fixed public policy. There is no wisdom in organizing this branch of insurance upon temporary lines, or with an eye to convenience of closing out. Nothing in European experience warrants the expectation that a well-established state or compulsory mutual fund will ever be superseded. Certainly no democratic government could wind up such an institution without adequate provision for its continuing obligations.

The assessment plan, while advantageous in itself, is by no means a necessary feature of monopolistic insurance. Capitalized reserves are open to monopolistic equally with competitive carriers, with the important difference that the adequacy of the reserves does not affect the solvency of the institution. If the reserves are excessive, a tax is imposed upon present, for the relief of future,

[1] Cf. Rubinow, *Social Insurance*, pp. 147–48.

industry, since the excess will one day be returned; if they are insufficient, the deficit can at any time be made good by an increase of rates. An insurance monopoly thus enjoys the unique ability of maintaining its solvency without any accurate forecast of the future cost of either past or future accidents. Of course, all this will not save a state or mutual fund which is not truly a monopoly, or which is limited to fixed premium rates.[1]

II. CLAIM SETTLEMENT

The speed and fairness with which accident claims are adjusted is not greatly affected by the form of insurance organization. Nadir in this respect is probably reached by so-called self-insurance, which gives the employer both the incentive and the opportunity to suppress minor claims by the threat of discharge.[2] A class mutual or other close association of employers may enlist the same motive to a considerable degree.[3] Ordinarily, however, an insured employer will back his workmen as against the insurer—he has paid his premium and does not stand to gain anything, directly and immediately, by shaving claims.[4] Vice versa, the insurance organization, as such, whether stock, mutual, or state, has always a motive to short-change the workmen in claim adjustment.[5] Competition doubtless increases the pressure in this direction, but the incentive is present in any case. The management of even a monopolistic state fund will naturally wish to please its constituents by a showing of economy.

The one security for prompt and equitable claim adjustment, then, lies in administrative control. Compulsory reporting of

[1] The experiences of Norway and West Virginia are very instructive upon this head.

[2] Such a threat will evidently be effective wherever the amount involved is less important to the workman than is the retention of his job.

[3] The Illinois Indemnity Exchange, an interinsurer, claims to have secured this sort of "co-operation" from its insurants. Certainly it has been a persistent offender against both promptness and fairness in claim adjustment.

[4] A well-founded objection to certain forms of experience rating is that they tend to align the employer with the insurance carrier in claim adjustment.

[5] The record of claim settlement in New Jersey is sufficiently illuminating in this respect. See *Three Years under the New Jersey Workmen's Compensation Law*, published by the American Association for Labor Legislation.

accidents, supervision of every case until the benefits are paid in full, free, summary, and non-technical process for the hearing of controverted claims, accessible and disinterested tribunals, both of first instance and of review, are the conditions of justice in the compensation of work accidents. It has been argued that state insurance violates one of these conditions in that the decision of accident claims rests with the very men who are responsible for raising the funds out of which these claims must be met.[1] This objection, if valid at all, holds only against a particular form of organization. It is not at all necessary that the compensation act and the insurance fund shall be administered by the same individuals. Even where the two are combined under one board there is commonly a large degree of practical separation of functions.[2]

The administrative authority, moreover, in any democratic government, is amenable to public opinion. The very existence of a compensation law implies a considerable opinion in its favor and a large class actively interested in the full payment of benefits. Lax and inefficient administration may be, and is, all too readily tolerated, but it is extremely doubtful whether a compensation-insurance board in any large American commonwealth could persistently deny or reduce the benefits provided by law.[3] In fine,

[1] See, e.g., Rubinow, *Social Insurance*, chap. ix.

[2] Compensation and state insurance administration are combined in California (competing), Nevada (monopoly), New York (competing), Ohio (quasi-monopoly), Ontario (monopoly), Oregon (monopoly), Washington (monopoly), and West Virginia (quasi-monopoly). The functions are quite distinct in Pennsylvania (competing) and Italy (competing) and largely so in Norway (monopoly).

[3] Observation and inquiry in a number of states over a period of several years have convinced the writer that the tendency of administration is clearly in the direction of liberalizing the compensation acts. Legislative changes are almost all in the same direction.

Charges have been circulated against the Industrial Insurance Department of Washington on the score of unfair claim settlement, but these charges lack verification. The published reports of the department do not disclose a shorter average duration of temporary disability, a less proportion of permanent disabilities, or a smaller amount of compensation than would be expected from general statistical experience. On the contrary, the proportion of permanent disability awards—the class of cases which offers the readiest opportunity for defrauding claimants of their due—is higher than in any other American jurisdiction. Only in one respect is there prima facie evidence of illiberality—the construction of "accidental injury." One claim is denied to every seventeen that are allowed, as against one to sixty-six in Wisconsin. The Washington

no form of insurance organization will adequately protect the rights of injured workmen without efficient administrative control, nor defeat them if such control is applied.

III. EQUITY OF RATES

Competition militates against an equitable distribution of accident cost in three distinct ways: (1) it enforces a difficult and dubious calculation of premium rates, (2) it leads to excessive subdivision of risk classes, and (3) it fosters sundry discriminations.

Competitive rate-making is complicated and uncertain by reason of two circumstances inherent in competition: current rates (1) must cover the present value of future payments upon currently arising claims, and (2) must be fixed prospectively at the beginning of the insurance term. The difficulties of estimating the future payments upon compensation claims were spoken of in another connection. Here it will suffice to remark that these

act is restricted to certain enumerated trades, which may account for a part of the difference. But it is plain, also, from the commission's own statements, that the meaning of accident is narrowly limited, and that such injuries as hernias, strains, abrasions from continued irritation, neuroses, and the like, are dealt with in the spirit of private accident insurance.

Of American jurisdictions, Ohio has by far the largest volume of state insurance experience, and the Ohio fund is administered by the same board which passes upon compensation claims. The very full statistics published by the Industrial Commission facilitate comparisons with the experience of states having a different mode of insurance. Such comparison lends little support to any charge of illiberal settlements.

Below are given certain significant facts bearing upon the settlement of compensation claims in Massachusetts, Ohio, Washington, and Wisconsin.

For Each 10,000 Accidents Causing Death or Disability of at Least One Week	Massachusetts	Ohio	Washington	Wisconsin
Number of temporary disabilities	9,299	9,360	8,409	9,300
Number of fatalities	130	129	262	200
Number of permanent total disabilities	4	4	9	5
Number of permanent partial disabilities	567	507	1,320	495
Claims disallowed per 10,000 awards	....	350	600	150
Average duration of temporary disabilities over one week (days)	34*	30	31	28
Average compensation:				
Temporary disabilities over one week	$30†	$30	$41	$37
Permanent partial disabilities	$331‡	$400	$286	$415

* Includes temporary disability from permanent injuries.

† Compensation paid only for disability of more than ten days.

‡ Average for 595 permanent partial disabilities which were not dismemberments. Compensation for dismemberment cases is not disclosed in the report.

always dubious estimates not only form the basis of reserves for past accidents, but enter largely into the insurance cost of future accidents. Under any adequate compensation law, indeed, deferred payments for deaths and permanent injuries are much the larger part of the total accident cost. Errors in estimating the capitalized value of these long-running claims are accentuated by the prospective method of rate-making which derives the premium rates of a given year from experience which, just because it lies in the past, can never fully coincide with the actually developed experience of the period to which the rates apply. Among the multiplicity of independently varying causes which affect work accidents, some are cyclical in character,[1] insomuch that rates derived from a series of good years may come to be applied to a series of bad years, and vice versa. To make a bad matter worse, it is precisely the fatal and permanent injuries, which bulk largest in insurance cost that are most subject to fluctuation. Yet the number and final cost of such injuries, as well as of lesser accidents, must be prognosticated, not merely for the industrial community as a whole, but for a multitude of more or less disparate employments. Lastly, it is important that the tariff of rates so derived shall be accurate as well as adequate. This point is clear as respects non-participating insurers, since persistently excessive charges would obviously drive insurants into participating carriers. Even the latter, however, are by no means exempt from the like requirements, for competition usually forces them to pay out in dividends any apparent excess of premiums over incurred losses and expenses. For the same competitive reasons the larger and more successful participating carriers make their rates prospectively, charging a fixed premium and paying a fixed dividend. Under competitive conditions, therefore, all insurers are practically obliged to fix rates in advance, upon the capitalized-reserve basis, and with as close an approximation as may be to the realized accident cost of each risk class. Evidently the requirement of accuracy under these conditions is very much harder to meet than that of adequacy alone. An adequate premium income might be obtained by spread-

[1] See *Proceedings of the Casualty Actuarial and Statistical Society of America*, II, No. 6, p. 418.

ing the cost of fatal and permanent injuries from the worst recorded experience over industry as a whole and estimating that cost from the American Experience Table with no allowance for remarriage or for impaired lives, but the resultant rates would be neither reasonable in the aggregate nor equitably distributed. Indeed, competitive insurance rates, even if reasonable on the whole, will almost certainly be either excessive or deficient for many particular classifications. The margin of error, moreover, will increase in direct proportion as the law provides adequate indemnity for death and permanent disability.

These very intricacies make it the more important that class rates shall rest upon a basis of exposure broad enough to produce a fairly stable average of accident experience. This is precisely what competition tends to prevent. In any broad industrial group there will be important variations of hazard, dependent upon the processes employed and the product turned out. Competition among insurers soon singles out the less hazardous members of the group until the original whole is split up into a multiplicity of subdivisions.[1] Left to itself, this subdivision of risk classes presently is carried so far that, on a majority of classifications, the exposure is too small to determine a rate. A remedy is then sought by making the number of rate groups much less than the number of risk classes[2] and assigning the minor classifications to these groups by a more or less arbitrary exercise of underwriters' judgment.[3] Even this method of conjectural rate-making breaks down wherever competition is really free, because the underwriters of rival companies differ both in their judgment of probable cost and in their eagerness for business at any price. Hence erratic rates, wide departures from any basis in industrial hazard, and violent

[1] For an elaboration of this point see *Proceedings of the Casualty Actuarial and Statistical Society of America*, II, No. 4, pp. 10–32.

[2] In the Pennsylvania compensation manual there are 77 basis rates as against some 1,400 manual classifications.

[3] For the actual process of rate-making see *Proceedings of the Joint Conference on Workmen's Compensation Rates*, 1915, published by the New York Insurance Department, and the (unpublished) *Minutes* of the Conference.

fluctuations, both horizontal and vertical, characterize an era of unrestricted competition in accident insurance.[1]

Conjectural rates unavoidably, and for the most part inadvertently, produce unfair discrimination between risk classes; the like discrimination between employers in the same class is more often intentional. It may be employed, advisedly, by the home office, to undermine the business of rival insurers, or it may result, without special design, from charging what the traffic will bear—which in this case means the highest premium that the particular employer can be induced to pay. Most commonly, however, the incentive is an agent's or broker's commission. Under competitive conditions the great bulk of insurance is sold through solicitors who are paid on a percentage basis. By and large, the companies are much too dependent upon their agents as business-getters to exercise effective control; particularly is this the case where the brokerage system obtains. The agent, and still more the broker, by virtue of his mode of remuneration, is interested solely in the volume of premiums; with the adequacy or equity of rates he has no concern. A system better calculated to secure insufficient premiums, unfairly distributed, could hardly be devised.

Governmental supervision is but a partial corrective of these evils. The supervising authority can require all carriers to report their experience, cause the same to be assembled, and use the combined results as a guide in passing upon the adequacy or reasonableness of risk tariffs.[2] But a government bureau has no magic means of determining the future cost of incurred claims, nor can it well set up its own judgment against that of skilled underwriters in the rating of risk classes which have not a sufficient exposure to determine a proper rate from actual experience. Lastly, wholesale discrimination in the underwriting of individual

[1] For illustrations see the *Third Annual Workmen's Compensation Report of the Industrial Commission of Wisconsin*, 1914, and the *Report on Workmen's Compensation Insurance of the* (Massachusetts) *Commission to Investigate Practices and Rates in Insurance*, Boston, 1915.

[2] California, Colorado, Kentucky, Maine, Maryland, Massachusetts, New York, and Pennsylvania have rate-regulation laws. All except Kentucky confine the regulation to approval in respect of adequacy, with or without prohibition of discrimination. Indirectly, however, the supervising authorities can and do exert effective pressure against rates which appear to be excessive.

risks cannot be prevented by the simple expedient of investigating chance complaints. Much the best solution hitherto devised is the compulsory rating-bureau[1] under public supervision, clothed with power to promulgate class (or basis) rates, apply "merit rating" to individual risks, assign unusual risks to existing or special classifications, and scrutinize the underwriting of all risks by the operation of a "stamping office,"[2] supplemented where necessary by physical inspection. Such a bureau, just because it comprises every type of competing insurer, will ordinarily be impartial, while at the same time it may fairly be said to embody the collective wisdom of the business. Whence it is at once the most potent instrumentality of the government for giving effect to rate regulation and almost the sole source of advice which is both competent and disinterested. But competition so straitened and bound loses those very attributes which admirers of the competitive system have always ascribed to it. When government enforces uniformity of rates and a bureau compels uniformity of underwriting, there is little opportunity for competitive selection of business and less for that competitive adjustment of price to the minimum cost of service which classical economists so fondly expounded. Even the flexibility which has been regarded as a chief advantage of private insurance is largely destroyed by rigorous regulation.[3] Quick adaptation to a change of conditions becomes impossible when every change of rates or revision of classifications has to be worked out by compromise of opposing interests.[4]

[1] Such bureaus, with varying powers, have been established in New York, Massachusetts, California, Pennsylvania, Oklahoma, and Colorado (the order is chronological).

[2] The "stamping office" receives, examines, and approves or disapproves a duplicate of every policy declaration. This practice was first established by the Industrial Commission of Wisconsin under the anti-discrimination law in July, 1913. It has been adopted by the rating bureaus of California, Pennsylvania, and Colorado.

[3] Cf. Rubinow, *Social Insurance*, p. 153.

[4] The benefits of the Massachusetts Compensation Act were increased by 50 per cent in October, 1914; a corresponding increase in insurance rates already inadequate under the original act only became effective in May, 1916. The experience on policies issued in 1913 and terminated, at the latest, December 31, 1914, was incorporated in the *Basis Manual* only after the lapse of 16 months. This last instance is significant only because of the very short period covered by compensation experience in the United States.

Lastly, the incentive to economic management, on the part of non-participating companies at least, is seriously weakened by the incorporation in basis rates of a uniform-expense loading derived from the average for all similar companies.

The difficulties of rate-making do not disappear of themselves with the establishment of monopoly. Whatever the organization for accident insurance, some approximation of rates to hazards will be demanded by the insurants. Even a compulsory trade mutual, if it covers any considerable range of industries, will be obliged to subdivide its members into risk groups—the manufacturers of china ware will not readily consent to pay the same rates for accident insurance as the makers of brick or of plate glass. For a comprehensive monopoly the number of such groups will evidently be much larger. In either case some risk classification of industries, together with a more or less extended tariff of rates and a more or less accurate measure of accident costs, is fairly indispensable.

Nevertheless, the shutting out of competition does reduce the problem to its lowest terms. It at once deletes the chief source of individual and class discriminations, and it greatly lessens the pressure toward minute splitting up of risk classes. More important still, it makes possible a retrospective rating system whereby accident cost is measured by actual outlays. This method of rate-making not only eliminates the uncertainties of capitalized reserve calculations, but furnishes, besides, a corrective to chance fluctuations in the number and severity of accidents which materially reduces the volume of exposure necessary to give a dependable average. This point is so important that it will bear further elucidation. Suppose three deaths and one permanent total disability occur in a single year in an industry which has an annual pay-roll of $1,000,000 and has shown a pure premium of $0.50 for a five-year period. Under an adequate compensation law these four cases might well capitalize at $30,000, or $0.60 per $100 of pay-roll for the entire five years. The result under the capitalized-reserve plan must be either an immediate doubling of rates, or else some more or less conjectural redistribution of the loss which is tantamount to abandoning this particular risk class as a basis of

independent rate determination. The assessment (or retrospective) plan would automatically distribute this abnormal loss over a whole generation. Hence an insurance monopoly can practically apply the principle of occupational risks to much smaller industrial groups than is possible to competitive insurers. It is worth repeating, however, that monopoly does not guarantee either sound or equitable insurance rates. State insurance organizations have universally adopted, in theory at least, the principle of capitalized reserves, thereby saddling themselves with a host of gratuitous difficulties. Nor has any state fund so much as attacked the problem of scientific risk classification. The *Ohio Manual* is not less intricate than the *Basis Manual* of the casualty companies, while the risk groupings of Washington and Norway appear to have been established by conjecture in the first instance, and not to have been revised in the light of intelligently analyzed experience. To which it must be added that unfair discrimination may result as well from political influence as from competitive underbidding.

IV. ACCIDENT PREVENTION

The prevention of work accidents devolves primarily upon the employer, since he alone controls the conditions of work. Insurance carriers can, however, stimulate prevention both by advice and instruction, and by furnishing a pecuniary incentive in the way of merit rating. Merit rating covers any systematic departure from class (basis) rates designed to reflect differences of hazard as between establishments in the same industry class. Such hazard variations may be measured either by the recorded accident experience of the establishment (experience rating) or by physical conditions, methods of work, and practices affecting safety (schedule rating). Experience rating provides a certain incentive to accident prevention because it makes the establishment rate depend in part upon the number and severity of injuries actually sustained in that establishment during a given period, but it furnishes no guidance in methods of prevention, which often is the larger half of the problem. Schedule rating combines incentive with instruction; it provides definite standards of mechanical safeguarding, working methods, and (most important of all) the education of

workmen in "safety first," while at the same time it penalizes unsafe conditions and practices.

Schedule rating[1] as a feature of workmen's compensation insurance in the United States dates back only three or four years, yet it has already attained an immense development. The methods are somewhat crude; the schedules are defective in construction; and the values, in terms of premium, of the hazard features therein enumerated are purely arbitrary.[2] These, however, are the defects of immaturity. In the main they are due to the want of any adequate statistical basis—a want which time may be expected to supply. More serious are the evils which result from the competitive application of schedule rating. When the scramble for business is keen and every insurer is free to charge just such premiums as the employer can be induced to pay, the rewards and penalties of schedule rating become a farce. The present situation in Wisconsin, as revealed by the official records of the Industrial Commission, is sufficient evidence on this head.[3] Some carriers honestly endeavor to rate their risks impartially upon actual inspection, others charge flat rates much below the actual cost of insurance, others still employ "merit rating" systems which are but ill-disguised evasions of the anti-discrimination law.[4] There is good reason to think that conditions are yet worse in such states as Illinois, Michigan, and New Jersey, where there is no pretense at public supervision. In New York, Pennsylvania, and California (prospectively also in Colorado), such abuses are kept in check by a compulsory rating bureau which inspects and rates every risk

[1] The subject of schedule rating is much too large and too technical to be dealt with in a general paper on workmen's compensation insurance. Very useful discussions will be found in several numbers of the *Proceedings of the Casualty Actuarial and Statistical Society of America.*

[2] An exception should be made of the "Coal-Mine Rating Schedule of the Associated Companies," in the construction of which at least crude statistical data were employed. See the *Proceedings of the Casualty Actuarial and Statistical Society of America*, II, 387–93.

[3] The writer was for three years in charge of workmen's compensation insurance under the Industrial Commission.

[4] The so-called schedules of the General Accident, the Prudential, and the London & Lancashire companies are instances in point.

subject to schedule rating.[1] How far this elaborate machinery will actually accomplish the results expected, in the way of accident prevention, it is still too early to determine.

Experience rating, in the United States at least, has hitherto not been systematically applied on any large scale, except by the Ohio state fund. The Ohio scheme is purely one of charges for abnormal losses.[2] If the cumulative loss ratio of a given establishment, exclusive of medical benefits, exceeds 40 per cent of the "preferred" (basis) rate, three-fourths of the excess, but not more than 24 per cent of the preferred rate, is charged to the assured upon renewal of his policy.[3] The statistical results of this plan, save as respects premium income, have not been made public. A form of experience rating was nominally in effect for about two years in New York, but the proportion of risks actually rated thereunder was infinitesimal.[4] More comprehensive plans have lately been introduced in Massachusetts and New York, with what effect remains to be seen. Experience rating has also been applied to a greater or less extent in free competition states, though under conditions which make it little else than a form of competitive rate-cutting.

A priori, it would appear that the most efficient accident insurance organization, from the preventive standpoint, is the compulsory trade mutual. Its members have the requisite technical knowledge to draft standards which embody the best shop practice and which are peculiarly adapted to the trades

[1] The Massachusetts bureau accepts the inspection reports of the carrying company—a practice which affords no guarantee of impartial rating.

[2] The reverse is true as respects contractors' risks.

[3] See description of the plan by E. E. Watson in *Proceedings of the International Association of Industrial Accident Boards and Commissions*, 1916.

The experience of the three years next preceding a rate adjustment is taken into account in determining the loss ratio. Medical and hospital aid is disregarded, and the loss chargeable on account of a death is limited to 40 per cent, and of a permanent total disability to 60 per cent, of the preferred premium during the experience-rating period.

[4] About 2,800 risks were experience-rated as against 25,000 schedule-rated, notwithstanding that the experience-rating plan was applicable to *all* schedule-rated risks and to many others. See *Report* of H. E. Ryan, associate actuary of the New York Insurance Department, February 3, 1916.

affected, while the association itself is under no competitive pressure either to lower the standards or to remit the penalties for non-compliance. Indeed, the pressure is all in the opposite direction. In an insurance carrier which covers diverse industries, any particular employing group may hope to gain a differential advantage either in basis rates or in merit rating. Under such circumstances rating bureaus are besieged by cotton spinners, flour millers, car builders, coal operators, and the rest, to tone down the safety standards and to reduce the schedule charges. But the case is otherwise when the members of a given trade are collectively and inescapably responsible for the accident cost therein. These theoretical considerations have been put to the proof in Germany, and the German compulsory mutuals have probably achieved more in the way of accident prevention than any other insurance carriers in the world.

A state monopoly should likewise be an effective promoter of industrial safety, for, if it has not the same close relations as a trade mutual with its assured, it at least possesses the power to enforce rigorous safety standards. Nor is it at all difficult to divide a compulsory state fund into industrial sections which will have much the same collective interest and much the same technical relation to accident prevention as the German mutuals. Something of this kind has actually been undertaken in Ontario,[1] though the experiment is too recent to give much indication of its practical effects. As a whole, however, the results of state insurance in the field of prevention are lamentably meager. No state fund in Europe or America has worked out a systematic scheme of schedule rating or has attempted to maintain an inspection service or a safety propaganda at all comparable to those of many a private insurance company.[2] The Ohio experience-rating plan and the promising experiment of Ontario are almost the sole positive contributions of compulsory state insurance to the safety movement. Shortsighted economy, on the part either of legislators or of administrative boards, appears to be chiefly to blame for this discreditable showing.

[1] See *Report of the Workmen's Compensation Board of Ontario*, 1915, p. 28.

[2] Ontario may prove a notable exception.

V. ECONOMY

The cost of accident insurance necessarily includes the legitimate expenses of management, whether paid out of premiums or out of the public treasury. To employers, doubtless, it is a clear gain that a part of this cost is met by the state, but that circumstance obviously does not decide the question of economy. Since the entire burden, in the long run, must somehow be borne by the community, that insurance organization is evidently most economical which returns the largest social service in proportion to the community's total outlay on account of work accidents.

The best, though not an absolute, test of economic management is the amount of overhead charge required to carry one dollar of compensation and medical relief to injured workmen and their dependents.[1] Comparisons even on this basis must be made with caution, particularly as respects different types of insurers operating under widely different compensation laws. Certain items of expense, not paid out of premiums, are prone to be omitted from the published reports of state insurance institutions or subsidized mutuals; the services rendered, moreover, are not always the same—and omission of valuable service is not economy. Lastly, the expense ratio is affected by the scale of benefits, for the overhead costs of insurance do not increase proportionately with the amount of compensation for injuries of the same number and character. With proper allowances, however, such a comparison will afford a decisive indicium of administrative economy.

Judged by this criterion, the advantage lies altogether with monopolistic insurance. Stock companies in the United States absorb at least 60 cents, and in Great Britain a decidedly higher amount,[2] for each dollar of compensation benefits. Even large and well-managed mutuals under competitive conditions need 30

[1] It has been customary to express the "expense ratio" as a percentage of premium income. This basis of comparison answers well enough when premium rates are uniform, but it is misleading for carriers which charge different rates of premium for the same benefits. Premium income may include a substantial surplus over all losses and expenses, as in the early years of the Massachusetts Compensation Act; it may cover actual losses only, as in the Washington state fund; or even something less, as for some years in the Norway Insurance Institution.

[2] Senate Document, No. 90, Vol. II, 249–55, 62d Congress, 1st session.

or 35 cents to carry 1 dollar to the beneficiaries of accident insurance. By way of contrast, the expense ratio, expressed in the same manner, is 16 per cent for the compulsory mutuals of the German Empire,[1] 15 per cent for the Insurance Institution of Norway,[2] 13 per cent for the Ontario[3] state fund, 12 per cent for the Ohio,[4] and 9 per cent for the Washington[5] fund. These figures are subject to some corrections. The German scale of accident benefits is much higher than the average for this country, a circumstance which tends to reduce the relative cost of management. Certain small additions should be made to the published expenses of state insurers for office rent and perhaps other items not included in the accounts. Some allowance must likewise be conceded against the state carriers (except Ontario) for failure to undertake effective accident prevention. But these discrepancies, after all, account for a very minor part of the wide difference in cost which the unrefined percentages so strikingly reveal.

Table I analyzes the management expenses of several types of accident insurance carriers in different jurisdictions. The most instructive parallel in this exhibit is that between the German

[1] *Twenty-fourth Annual Report of the United States Commissioner of Labor*, pp. 1095–1102. These figures are for the Industrial Accident Insurance Associations, 1908. The associations receive certain gratuitous services from the post-offices and Imperial Insurance Office, whereas they bear the costs of arbitration courts. Probably the government services are not greater nor more properly chargeable to accident insurance carriers in Germany than in the United States. It must be remembered that insurance departments and compensation boards in this country are maintained by general taxation.

[2] *Ibid.*, p. 2059. No functional analysis is available.

[3] *Report of The Workmen's Compensation Board, of Ontario*, 1915. In computing this percentage I have included the Commissioners' salaries (paid by the province), cost of permanent equipment (furnished by the province), the subventions to employers' associations, and all administrative expenses charged to "Schedule I," but have excluded both benefits and expenses under "Schedule II." There is no functional analysis of expenses.

[4] *Statement of the Condition of the Ohio State Insurance Fund*, May 15, 1916. No details are published, and it is impossible to say whether the fund's expenses are properly segregated from the other expenses of the Industrial Commission.

[5] *Fourth Annual Report of the Industrial Insurance Department*, 1915, pp. 9, 10, 13. All expenses of the Industrial Insurance Department, which administers the fund, are here included. Details are not given in the *Report*.

mutuals and the stock companies operating in the state of New York. The benefits are reasonably comparable and the insurance functions in both cases very much the same—certainly few would have the hardihood to assert that the stock companies render any service to their assured, or to the public, which is not equally well performed by the German associations. The greater overhead cost of the private companies—nearly three times that of the compulsory mutuals—is purely attributable to competitive waste.

TABLE I

COST OF ACCIDENT INSURANCE MANAGEMENT FOR EACH $1.00 OF COMPENSATION BENEFITS

Expenditures for	German Mutuals, 1908* 1	New York Stock Companies, 1915† 2	United States Stock Companies, 1914‡ 3	Wisconsin Stock Companies, 1915‖ 4	Wisconsin Mutuals, 1915‖ 5	Massachusetts Mutuals, 1912–14¶ 6
All management§...	$0.160	$0.464	$0.625	$0.633	$0.345	$0.242
Acquisition of business............	.0	.262	.291	.267	.071	.016
Adjustment of claims...........	.044**	.052	.117	.133	.027	.09
Accident prevention	.015	.045	.067	.050	.043	.038
General administration.............	.101	.105	.150	.183	.204††	.098

* Industrial Associations, *Twenty-fourth Annual Report of the United States Commissioner of Labor*, pp. 1095–1102.

† Unpublished data from "Schedule W" of the New York Insurance Department.

‡ *Proceedings of the Joint Conference on Workmen's Compensation Insurance Rates, New York Insurance Department*, pp. 24–25. The percentages are computed upon an assumed loss ratio of 60 per cent.

‖ *Workmen's Compensation Insurance Bulletin, Industrial Commission of Wisconsin*, 1916, Table IV. The loss ratio shown in Table III was increased to 60 per cent for stock companies to allow for underestimate of outstanding liabilities. This allowance, of course, decreases the expense ratio.

¶ Unpublished data from "Schedule W" of the Massachusetts Insurance Department.

§ Total excludes taxes.

** Includes the cost of arbitration courts, which, in this country, is generally paid by the state.

†† This item apparently covers a substantial portion of both acquisition and adjustment costs.

For the luxury of competing insurance employers in the state of New York pay about $5,000,000 annually. A more serious matter, from a social standpoint, is that the same premiums now received by casualty companies would, with an economical organization of insurance, add fully 25 per cent to the aggregate of compensation benefits. The difference would nearly suffice to provide life

pensions, in lieu of the present limited payments, for all cases of permanent partial disability.[1]

Salesmanship is the great extravagance of private compensation insurers, costing more than all the legitimate expenses of the business. Selling commissions alone, in the United States, absorb 17.5 per cent of stock-company premiums, or nearly 30 cents on every dollar of compensation benefits.[2] There is probably a social justification for such selling methods in the case of purely voluntary insurance, but when the obligation to insure is imposed by law, solicitation serves no useful purpose.[3] At best, salesmanship is a necessary evil of competition. Even state and mutual insurers, under competitive conditions, are forced to incur quite substantial expenses of acquisition, though these may not appear as such in their published accounts.

Apart from selling costs, the economies of monopoly are rather small. There is some duplication of administrative staffs, claim adjusters, pay-roll auditors, and the like, among a multiplicity of insurers, but these items, after all, do not bulk very large in comparison with claim payments under any adequate scale of indem-

[1] A computation upon the Rubinow Standard Accident Table indicates that the substitution of life pensions for limited payments in the case of permanent partial disabilities would increase the aggregate benefits of the New York act by 38 per cent. Adding 16 per cent for management expenses we obtain the ratio 160 to 146—an increase of about 10 per cent in the present stock-company cost of insurance.

[2] Standard commissions are 17.5 per cent. Some of the weaker and worse-managed companies pay 25 per cent. On the other hand, the associated companies limit commissions on coal-mine insurance to 10 per cent.

[3] Mr. W. G. Cowles, of the Travelers Insurance Company, in a very able defense of the agency system (*The Agency Expense of Workmen's Compensation Insurance*, the Travelers Insurance Company), assigns three functions to the solicitor: (1) wide distribution of risk, favorable to solvency and stability of rates, (2) wise selection of insurance carriers, and (3) helpful advice to employers in claim settlement and accident prevention.

These functions, it is to be remarked, are all conditioned upon the competitive organization of insurance. It may be conceded at once that the agency system is a necessary feature of private competitive insurance. That, however, does not establish its social usefulness. A state or mutual monopoly of compensation insurance would renounce the solicitor and all his works. The agent is a functional in this particular field, in that he is but part and parcel of an uneconomic organization of insurance.

nity.[1] In the matter of accident prevention, regulated competition might readily command all the economies of monopoly, for there are none save competitive objections to the furnishing of full inspection and propaganda service by the central rating bureau. Companies which have built up efficient safety-engineering staffs at heavy expense naturally do not wish to forego their differential advantage—safety inspection being one of the services which they sell in competition with other insurers. From the standpoint of the insured public, however, the system whereby the bureau inspects a plant exclusively for rating purposes and the carrier again goes over the same ground for the sole purpose of making safety recommendations, after which the bureau must reinspect in order to determine what improvements have been made, is indefensible. The high cost of safety promotion under these conditions is, in good part, a concealed selling expense.

By every test which can fairly be applied, therefore, the competitive organization is inappropriate to work-accident insurance. Left to its own devices, competitive insurance is excessively wasteful in operation, inefficient for accident prevention, and unfairly discriminatory in its incidence of burdens; it fails even to meet the elementary requirement of ultimate security. Many of these defects can be overcome by effective public regulation; but effective regulation deprives the system of every characteristic of competition except its unnecessary cost. From the standpoint of social utility—and no other standpoint is admissible in any question of social insurance—the case for monopoly is fairly overwhelming. Probably no publicist would care to advocate a private monopoly in this connection. The choice lies, therefore, between compulsory state and compulsory mutual insurance.

Actual experience with compulsory state insurance in this field has been too brief in time and too limited in volume to admit of any definite conclusions. Exclusive, or substantially exclusive, state

[1] Reduced to their lowest terms, these functions cost 9 per cent of benefits in the Washington state fund as against 16 per cent in the stock companies of New York—a difference of some 10 per cent in total premiums upon the Washington basis. There is good reason to believe, moreover, that the Washington fund might, to public advantage, spend more for statistical and actuarial service and perhaps also for claim settlement.

funds exist in Norway, Ontario,[1] Ohio,[2] Washington, Oregon, and Nevada. It is easy to chronicle the errors of these experiments—the disastrous attempts in Norway and West Virginia to fix insurance costs by legislative fiat,[3] the limitation of reserves by the Washington act to an insufficient amount,[4] the provision in the same law which makes each risk group a self-contained fund and which, in a notable instance, has prevented the payment of accrued pensions by a perfectly solvent insurer, the generally inadequate measures for accident prevention and the comprehensive failure to publish, perhaps even to make, intelligible analyses of experience. The bill of particulars is formidable enough, but it is important to note that none of these shortcomings is inherent in state insurance, as the defects previously spoken of inhere in competition. The feasibility of state insurance is purely a question of intelligent organization in the first instance and of efficient administration afterward. Whether these conditions are likely soon to be fulfilled in many of the American commonwealths may be fairly debatable. Meanwhile, the record of compulsory state funds certainly does not suffer by comparison with competitive insurance.

Compulsory employers' mutuals have a history of thirty-five years in the German Empire, and a record of social achievement to which private accident insurance affords no parallel.[5] Strangely

[1] Municipalities and public-utility corporations are exempted.

[2] Employers may secure an exemption from state insurance upon a proper showing of ability to carry their own risk, and may then reinsure in private companies. The actual amount of private insurance is very trivial (less than 10 per cent), though the competition of stock companies has put the state fund to considerable expense and trouble.

[3] The Washington act fixes maximum rates, but in this case the legislature apparently guessed high enough.

[4] The maximum reserve is limited to $4,000, notwithstanding that the actual liability of the fund may greatly exceed this sum.

[5] Dr. F. Friedensburg, in a brochure widely circulated in this country by an association of casualty companies, very severely criticizes the German system of social insurance. Curiously enough, in view of the obvious purpose of its American publishers, this polemic is directed against workingmen's insurance as such, or against details of administration (notably the liberal treatment of claimants), and not at all against the mutual organization of insurance. One gathers that the casualty companies aforesaid prefer employers' liability to workmen's compensation. As to the main point of the tirade, the showing of Germany in the present war is a sufficient commentary upon Dr. Friedensburg's gloomy prophecies of a decadent nation.

enough, this mode of organization is not comprised among the many American experiments in this field of endeavor.[1] Some adaptation would doubtless be required. In the industrially small states the plan might not be feasible at all; even in the larger commonwealths it probably would be wise to form a single insurance association with a common guarantee fund, but with semi-automatous trade sections. The precise structure best suited to the local conditions of a particular jurisdiction does not concern the present inquiry, though it would demand most careful study in any legislative proposal. A compulsory employers' insurance association would be relatively free from the sinister interference of party politics, which is the bane of governmental institutions in this country; it would be at least as economical as state insurance, and would stand a far better chance of administrative efficiency. From the workmen's point of view, it would have the advantage of placing the decision of compensation claims in the hands of men who have nothing to do with the fixing of insurance rates; and to employers it would offer the correlative advantage of vesting the management of their funds in a body chosen by themselves. Lastly, in the very important respect of accident prevention, compulsory employers' mutuals should secure the maximum attainable results. In short, the plan promises so well a priori and has worked so well abroad, that it deserves a thorough trial in at least one of our larger industrial commonwealths.

It would be presumptuous, at the present stage of workmen's compensation experience, to urge a single type of insurance organization as the sum of all good at all times and places. The varied experiments now being tried out in this country have at least this advantage: they make it possible to compare diverse insurance plans under similar political and economic conditions. But intelligent comparison presupposes intelligible statistics of operations—something which has yet to be achieved in a majority of the United States. None of the state funds has published a functional analysis of operative expense, a detailed statement of reserves by nature and severity of injury and number of dependents, nor so much as

[1] Such a plan was proposed in Massachusetts in 1912, but was defeated in the legislature.

the pure premium experience by risk classes. Nor are matters much better in the dozen or more states which have operated under the competitive insurance plan long enough to have accumulated valuable experience. Pure premiums have been published by three states, details of expenses by one, and details of reserves, sufficient to give any test of adequacy, by none. In such a situation counsel but too often darkens knowledge. Every legislative, or even administrative, proposal is seen as through a glass obscured by hazy information and colored by interested views. Just because work-accident insurance in this country is new and changing; because varied types of insurers are bidding for the public favor, each claiming to be the best; because general opinion on this subject is yet fluid; and because other branches of social insurance are fast coming upon the stage of practical politics—it is the more incumbent upon public authorities everywhere to collect and disseminate the information upon which alone a just public opinion can be founded. Complex social problems are not solved by good will alone, but by zeal fortified with exact knowledge. If another decade of American experimentation shall fail to achieve a reasonably uniform and efficient organization of workmen's compensation insurance, the fault will lie, in great part, with those administrators who have failed to appreciate the relation of statistics to social progress.

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